

## COMMENTARY

## EDUCATION

The total population aged 14 years of age and over in 1971 was 2,105,321 of whom 1,049,614 were males and 1,055,707 were females. Of these, some 186,138 persons, comprising 95,031 males and 91,107 females, were attending school, university, etc. on a full-time basis. The remaining 1,919,183 persons had ceased full-time education.

## CHANGES, 1966 — 71

In Table A below, the 1966 and 1971 populations are compared, showing persons still at school, university, etc. and those whose full-time education had ceased.

**TABLE A:- POPULATION AGED 14 YEARS AND OVER, SHOWING PERSONS STILL AT SCHOOL, UNIVERSITY, ETC., AND PERSONS WHO HAD CEASED FULL-TIME EDUCATION, 1966 AND 1971.**

	Persons		Males		Females	
	1966	1971	1966	1971	1966	1971
	(Thousands)					
Persons who have ceased full-time education	1,896	1,919	944	955	952	965
Persons still at school, university etc. full-time	143	186	74	95	69	91
Total aged 14 years and over	2,039	2,105	1,018	1,050	1,021	1,056

While the population aged 14 years and over rose by 66,000 or 3.3 percent, between 1966 and 1971 the number of these persons in full-time education rose by 43,000 or 30.2 percent. The proportion of the male population aged 14 years and over who were still in full-time education in 1971 was 9.0 percent compared with 7.0 percent in 1966. The corresponding proportions for females were 8.6 percent in 1971 and 6.8 percent in 1966.

Table B provides a comparison between 1966 and 1971 of the proportion of persons at each of the ages 14 to 24 who were receiving full-time education.

**TABLE B:- PERCENTAGE OF PERSONS AGED 14 TO 24 YEARS RECEIVING FULL-TIME EDUCATION, 1966 AND 1971.**

Age	Persons		Males		Females	
	1966	1971	1966	1971	1966	1971
14 years	73.7	84.6	72.5	84.8	75.0	84.4
15 "	59.0	74.9	56.6	74.1	61.5	75.8
16 "	43.4	59.3	39.6	55.7	47.4	63.0
17 "	39.9	44.5	28.6	40.1	33.3	49.0
18 "	19.5	26.4	19.5	25.2	19.5	27.7
19 "	12.7	15.3	13.8	16.0	11.5	14.6
<b>Total 14-19 "</b>	<b>41.1</b>	<b>52.2</b>	<b>39.5</b>	<b>50.7</b>	<b>42.8</b>	<b>53.9</b>
20 "	9.6	10.8	11.6	12.2	7.4	9.2
21 "	7.9	8.1	10.4	10.2	5.2	5.8
22 "	5.9	6.1	8.6	8.4	3.1	3.6
23 "	4.1	3.8	6.7	6.1	1.5	1.5
24 "	3.0	2.5	4.8	3.9	1.2	1.1
<b>Total 20-24 "</b>	<b>6.4</b>	<b>6.4</b>	<b>8.7</b>	<b>8.3</b>	<b>3.9</b>	<b>4.4</b>
<b>Total 14-24</b>	<b>28.2</b>	<b>34.0</b>	<b>28.2</b>	<b>33.8</b>	<b>28.3</b>	<b>34.2</b>

It is clear from this table that there has been a substantial increase, in the case of both males and females, in the proportion of persons receiving full-time education in each of the ages 14-20 years. However, in the 21-24 year age group, there was a decline in educational participation in the case of males which was evident for only one single year of age (24), for females. Overall, the proportion of males aged 14-24 years in full-time education increased from 28.2 percent to 33.8 percent while the proportion of females increased from 28.3 percent to 34.2 percent. Corresponding proportions for the 14-19 year age group were 39.5 percent and 50.7 percent in 1966 and 1971, respectively, for males and 42.8 percent and 53.9 percent for females.

## AGE AT WHICH EDUCATION CEASED

The improvement in the educational level of the population between 1966 and 1971 in terms of the age at which education ceased is illustrated in Table C.

**TABLE C:- DISTRIBUTION OF PERSONS, MALES AND FEMALES WHO CEASED FULL-TIME EDUCATION ACCORDING TO AGE AT WHICH FULL-TIME EDUCATION CEASED, 1966 AND 1971.**

		Total whose full-time education has ceased (excl. age not stated)	Percentage who left school, university, etc. aged:-					
			Under 15	15	16	17	18	19 and over
Males	1966	100.-	60.0	10.9	12.2	5.3	5.7	5.9
	1971	100.-	55.1	11.3	13.3	6.7	6.7	7.0
Females	1966	100.-	49.5	11.9	15.1	9.1	9.2	5.2
	1971	100.-	47.0	11.6	14.9	10.4	10.0	6.2
Total	1966	100.-	54.8	11.4	13.7	7.2	7.5	5.6
	1971	100.-	51.0	11.4	14.1	8.5	8.4	6.6

The proportion of the 1971 population who had ceased their full-time education who were aged under 15 years of age when leaving education was 51.0 percent as compared with 54.8 percent in the corresponding 1966 population. This improvement was more pronounced in the case of males with the proportion in this case falling from 60.0 percent to 55.1 percent. Corresponding increases for each of the single years of age from 15 upwards reflect the improving situation. In the case of females, the proportions leaving full-time education at ages 15 and 16 also fell.

The proportion of the 1971 population who ceased education aged 19 years of age and over was greater for males than females, being 7.0 percent as compared with 6.2 percent. These figures also show some improvement on the situation in 1966 when the corresponding proportions were 5.9 percent and 5.2 percent, respectively.

## LEVEL OF EDUCATION

The improvements outlined in Table C are also shown in similar fashion by reference to the highest level of educational establishment attended, in Table D.

**TABLE D:- DISTRIBUTION OF PERSONS, MALES AND FEMALES WHO CEASED FULL-TIME EDUCATION ACCORDING TO HIGHEST LEVEL OF EDUCATIONAL ESTABLISHMENT ATTENDED, 1966 AND 1971.**

		Total whose full-time education has ceased	Percentage who attended:-				
			Secondary	Vocational	Secondary and Vocational	University or Higher Technical, etc.	Primary (incl. not stated)
Males	1966	100.-	13.8	8.1	3.5	4.6	70.0
	1971	100.-	15.4	10.1	3.5	5.2	65.8
Females	1966	100.-	19.3	8.1	5.9	3.1	63.6
	1971	100.-	20.5	8.5	6.0	3.5	61.6
Total	1966	100.-	16.5	8.1	4.7	3.9	66.8
	1971	100.-	18.0	9.3	4.8	4.3	63.7

It can be seen from this table that the proportion of persons who attended second or third level education increased for both males and females between 1966 and 1971. The proportion of males who attended primary level only (including those not stating the level attended) fell from 70.0 percent to 65.8 percent while the corresponding fall for females was from 63.6 percent to 61.6 percent. The proportion of those who had ceased their full-time education who had attended university or other third level institution increased from 3.9 percent to 4.3 percent over the five-year interval.

The changes between 1966 and 1971 indicated in Tables C and D are not substantial as it must be remembered that the great majority of persons who were recorded as having ceased full-time education in the 1966 Census were also present in 1971. The changes are brought about mainly by the inclusion in 1971 of persons who left the educational system since 1966 and by the exclusion (through deaths) of persons in the older age groups. It can be seen, by observing the extreme ends of the age classification in Table E, how substantially different these groups are in relation to the level of education attained.

## PRESENT AGE

The gradual improvement over time in the education level of the population is illustrated in Table E by reference to the proportion of persons in each age group who left school, university, etc. at each year of age.

**TABLE E:- PERCENTAGE OF THE POPULATION AGED 20 YEARS AND OVER WHO LEFT SCHOOL, UNIVERSITY, ETC. AT VARIOUS AGES.**

Present Age	Total	Percentage who left school, university, etc. aged:-			
		Under 15	15 - 16	17 - 18	19 and over (including those still in education)
<b>Males</b>					
20 - 24	100.-	35.2	28.4	20.3	16.0
25 - 29	100.-	40.5	27.8	19.1	12.6
30 - 34	100.-	46.1	26.2	17.0	10.7
35 - 44	100.-	54.1	23.4	14.0	8.5
45 - 54	100.-	58.9	22.4	11.6	7.1
55 - 64	100.-	64.5	20.4	8.9	6.3
65 - 74	100.-	71.0	17.8	6.8	4.4
75 and over	100.-	76.9	14.5	4.8	3.8
<b>Females</b>					
20 - 24	100.-	29.7	27.7	29.7	13.0
25 - 29	100.-	33.3	28.9	27.7	10.1
30 - 34	100.-	37.6	28.2	25.3	9.1
35 - 44	100.-	44.2	26.8	22.1	6.9
45 - 54	100.-	48.8	26.5	19.0	5.6
55 - 64	100.-	54.2	24.7	15.7	5.4
65 - 74	100.-	61.6	21.3	12.2	4.8
75 and over	100.-	67.6	18.9	9.4	4.1

In this table, persons still receiving full-time education are included in the calculations as the table deals only with persons aged 20 years and over and, therefore, such persons will all fall into the category of ceasing full-time education aged 19 years and over. For males, the improvement in educational levels is illustrated in the fall in the proportion leaving education at under 15 years of age from 76.9 percent in the case of males aged 75 years and over to 35.2 percent for males in the 20-24 year age group. The proportions leaving education at this age are smaller, in all age groups, for females but the same steady improvement with age is obvious - the corresponding proportions being 67.6 percent and 29.7 percent, respectively. The change in the minimum school-leaving age from 14 to 15 will obviously result, in time, in the proportion leaving school in this age group declining dramatically.

The improvement is shown, in contrasting fashion, by the increases, for successively younger age groups, in the proportions leaving full-time education aged 19 years and over. Thus 16.0 percent of males aged 20 to 24 years fell into this category in comparison to 3.8 percent of males aged 75 years and over. In the case of females, the same patterns are evident, but in general the proportion leaving full-time education aged 19 years and over is less than for males.

## REGIONS

Regional differences in educational level are examined in Table F, which shows the distribution of persons in each of the Planning Regions according to the highest level of educational establishment attended. The composition of the Planning Regions is outlined in Appendix E. Some of the differences between regions are due, of course, to the differing age and socio-economic structures within those regions; a large industrial and commercial centre like Dublin will, for example, attract to it a sizeable number of persons who attained higher educational level elsewhere. The improvement in the educational level in line with age was illustrated in the preceding section so that a region with a younger age structure would, by virtue of that fact alone, present a better picture in terms of educational level than would a region with an older age structure.

**TABLE F:- PERCENTAGE DISTRIBUTION IN EACH PLANNING REGION, OF PERSONS WHO HAVE CEASED FULL-TIME EDUCATION ACCORDING TO HIGHEST LEVEL OF EDUCATIONAL ESTABLISHMENT ATTENDED.**

Planning Region	Total whose full-time education has ceased	Percentage who attended:-					
		Secondary	Vocational	Secondary and Vocational	University or Higher Technical,etc.	Primary (incl. not stated)	
Males	East	100.-	20.1	12.1	4.6	7.7	55.5
	South West	100.-	15.3	10.2	4.1	4.8	65.7
	South East	100.-	16.4	9.8	3.8	3.7	66.2
	North East	100.-	11.6	9.6	2.4	3.4	73.0
	Mid West	100.-	17.1	8.8	4.1	4.2	65.7
	Donegal	100.-	6.5	7.1	1.2	3.1	82.2
	Midlands	100.-	10.6	9.1	2.0	3.2	75.0
	West	100.-	9.4	6.5	1.4	4.0	78.7
	North West	100.-	7.6	10.9	1.3	3.5	76.8
	TOTAL	100.-	15.4	10.1	3.5	5.2	65.8
Females	East	100.-	23.0	8.8	7.4	4.1	56.6
	South West	100.-	21.4	7.4	6.8	3.4	61.0
	South East	100.-	22.1	8.4	6.0	2.8	60.7
	North East	100.-	14.9	10.8	3.2	2.6	68.5
	Mid West	100.-	22.6	8.3	6.7	3.2	59.3
	Donegal	100.-	8.9	8.3	2.2	2.7	78.0
	Midlands	100.-	17.2	9.3	3.9	2.8	66.8
	West	100.-	16.3	6.7	4.0	3.5	69.5
	North West	100.-	14.4	9.1	3.4	3.4	69.6
	TOTAL	100.-	20.5	8.5	6.0	3.5	61.6

It is clear from this table that the East Region contained the highest proportion of both males and females who had attended university or other third level institution. The respective proportions for males and females were 7.7 percent and 4.1 percent with the next highest being, in the case of males, the South-West (4.8 percent), and, for females, the West (3.5 percent).

In comparison, the regions with the highest proportions of persons who had attended Primary level only (incl. not stated) were Donegal, 82.2 percent of males and 78.0 percent of females, followed by the West and the North-West. In all regions, except the East, the proportion of males who had attended Primary level only was higher than the corresponding proportion of females. In the East Region, however, the proportion of females, 56.6 percent, was slightly higher than that of males, 55.5 percent. For the State as a whole, the comparable figures were 65.8 percent of males and 61.6 percent of females.

## GAINFULLY OCCUPIED PERSONS

Changes in the educational level of gainfully occupied and not gainfully occupied males and females between 1966 and 1971 are examined in Table G.

**TABLE G:- PERCENTAGE DISTRIBUTION OF GAINFULLY OCCUPIED AND NOT GAINFULLY OCCUPIED PERSONS WHO HAVE CEASED FULL-TIME EDUCATION ACCORDING TO HIGHEST LEVEL OF EDUCATIONAL ESTABLISHMENT ATTENDED, 1966 AND 1971.**

		Total	Percentage who attended:-				
			Secondary	Vocational	Secondary and Vocational	University or Higher Technical, etc.	Primary (incl. not stated)
			Males				
Gainfully occupied	1966	100.-	14.5	8.9	3.8	4.9	67.9
	1971	100.-	16.5	11.2	3.9	5.6	62.8
Not gainfully occupied	1966	100.-	8.5	2.4	1.1	2.7	85.2
	1971	100.-	8.0	2.6	0.9	2.0	86.4
Total aged 14 years and over who have ceased full-time education	1966	100.-	13.8	8.1	3.5	4.6	70.0
	1971	100.-	15.4	10.1	3.5	5.2	65.8
			Females				
Gainfully occupied	1966	100.-	24.4	11.7	9.6	6.1	48.2
	1971	100.-	27.6	12.3	9.7	7.5	42.9
Not gainfully occupied	1966	100.-	17.1	6.5	4.3	1.8	70.4
	1971	100.-	17.5	6.8	4.4	1.8	69.5
Total aged 14 years and over who have ceased full-time education	1966	100.-	19.3	8.1	5.9	3.1	63.6
	1971	100.-	20.5	8.5	6.0	3.5	61.6

In the case of males, the improvement in the educational level of the gainfully occupied population is illustrated by the fall from 67.9 percent to 62.8 percent in the proportion who attended Primary level only whereas the proportion at each of the other levels increased. In the case of the not gainfully occupied sector, however, the proportion who attended Primary level only rose from 85.2 percent to 86.4 percent. This sector, of course, contains a far higher proportion of the older age groups and, as was noted in Table E, there has been a steady improvement in the educational level of the population for successively younger age groups.

A similar improvement is shown in the case of females. In this case, a far higher proportion of the gainfully occupied group had attended second and third level than in the case of males and this proportion had increased between 1966 and 1971. The younger age structure of the female labour force as compared with the males is responsible for the better educational profile. This is also, in fact, true of the not gainfully occupied female sector which showed a very similar distribution to that in 1966. Included in this sector are married women engaged in home duties as well as retired women, etc.

## SCIENTIFIC OR TECHNOLOGICAL QUALIFICATIONS

## AGES

A total number of 21,886 persons, of whom 17,394 were males and 4,492 females, had qualifications in science or technology as defined for Census purposes (see page 155). Of these, the great majority, some 18,909, were gainfully occupied. The distribution by age group of males and females in each of the four main branches of science in which their qualifications were held is shown in Table H.

**TABLE H:- PERCENTAGE DISTRIBUTION BY AGE OF GAINFULLY OCCUPIED PERSONS WITH SCIENTIFIC OR TECHNOLOGICAL QUALIFICATIONS.**

Subject or Branch in which scientific or technological qualification held		Age group							
		Total	Under 25	25-29	30-34	35-44	45-54	55-64	65 and over
Agricultural sciences	Males	100.-	7.1	17.4	17.7	25.9	21.2	8.1	2.6
	Females*	100.-	15.5	21.4	6.0	15.5	17.9	17.9	6.0
Engineering and technology	Males	100.-	6.8	14.2	16.0	29.8	21.1	9.9	2.3
	Females*	100.-	12.7	23.6	12.7	20.0	20.0	9.1	1.8
Medical and related sciences	Males	100.-	2.3	11.0	8.6	23.3	27.4	18.2	9.2
	Females	100.-	9.2	18.9	9.9	24.3	24.0	8.9	4.8
Natural sciences	Males	100.-	10.1	23.5	22.0	21.2	12.1	8.4	2.8
	Females	100.-	14.8	21.6	15.3	20.0	12.4	12.4	3.6
Total	Males	100.-	6.2	15.4	15.3	25.8	21.4	11.5	4.3
	Females	100.-	11.3	20.0	11.7	22.5	19.8	10.3	4.3

\*Less than 100 persons

Of the 16,300 gainfully occupied males, some 21.6 percent were aged under 30 as compared with 31.3 percent of females. The Natural Sciences group had the highest proportion of males in the younger age groups whereas the lowest proportion of young persons were in the Medical and related Sciences, with 13.3 percent of males and 28.1 percent of females in this group being in the under 30 years age group. In each of the main branches of science, a greater proportion of gainfully occupied women were in the younger age groups.

The greatest proportion of older males, was correspondingly, in the Medical and related Sciences group - 27.4 percent were aged 55 years and over as compared with 15.8 percent of all gainfully occupied males with scientific qualifications. In the case of females, the highest proportion in this age group was 16.0 percent in the Natural Sciences group as compared with 14.6 percent overall.

## REGIONS

In Table J, the distribution by Planning Region of gainfully occupied persons in each of the four main branches of science is outlined.

**TABLE J:- PERCENTAGE DISTRIBUTION BY REGION OF GAINFULLY OCCUPIED PERSONS WITH SCIENTIFIC AND TECHNOLOGICAL QUALIFICATIONS BY MAIN BRANCH OF SCIENCE.**

Planning Region	Branch of science in which qualification is held					Total gainfully occupied Population
	Agricultural sciences	Engineering and Technology	Medical and related sciences (incl. Pharmacy)	Natural sciences	Total	
Total	100.-	100.-	100.-	100.-	100.-	100.-
East	26.8	60.3	49.0	53.3	48.8	35.7
South West	20.3	12.5	14.2	15.5	15.1	15.6
South East	15.1	5.6	7.6	6.7	8.3	11.0
North East	5.2	3.0	4.5	3.2	4.0	5.8
Mid-West	12.4	7.1	6.7	6.3	7.9	9.6
Donegal	2.6	1.6	2.4	1.8	2.1	3.6
Midlands	7.0	3.5	4.8	3.5	4.6	7.8
West	7.8	5.2	8.6	8.2	7.3	8.7
North West	2.8	1.1	2.2	1.4	1.9	2.6

Thus, the East Region, though containing 35.7 percent of all gainfully occupied persons, accounted for 48.8 percent of such persons with scientific or technological qualifications. An even higher proportion of persons with qualifications in Engineering and Technology and in the Natural Sciences, 60.3 and 53.3 percent respectively, were in this region while, not unexpectedly, the proportion in Agricultural Sciences was low, at 26.8 percent. The distribution of persons in the Medical and related Sciences and in Natural Sciences was broadly similar to that of the total population.